Islam and Medicine: A General Overview

Fazlur Rahman

Perspectives in Biology and Medicine, Volume 27, Number 4, Summer 1984, pp. 585-597 (Article)

Published by Johns Hopkins University Press
DOI: *https://doi.org/10.1353/pbm.1984.0001*

For additional information about this article
https://muse.jhu.edu/article/403609/summary

Access provided by Macquarie University (27 Feb 2019 10:05 GMT)

ISLAM AND MEDICINE: A GENERAL OVERVIEW

*FAZLUR RAHMAN**

Introduction

At the time of the appearance of Islam in Mecca, there were some Arabs with a knowledge of medicine. They had acquired this knowledge at the medical school established earlier at Gundishāpūr in southwestern Iran by the Persian king Anūshirawān, who had invited medical experts from Greece and India to teach. Scientific medicine was, therefore, known in Arabia, at least in Mecca [1]. The Koran (Qur'ān) [2] itself does not speak about medicine, although it sets high value on health and restoration of health. It stresses good food, like milk and honey (16:66–69), as blessings of God for man; it speaks not only of grains and fruits created for man by God but reiterates in several places that the "heavens and the earth and whatever is therein has been made subservient to man" to exploit for his good ends (e.g., 22:65, 31:20, 45:13) and he has been created to serve God's purposes. It stresses cleanliness in both physical and spiritual terms and lays down rules of ablution and bathing (e.g., 8:11; 5:41).

In the spirit more of the Old Testament than that of the New Testament or of the Greeks, the Koran does not accept a radical mind-body dualism in man. Although it speaks of an outer, physical and an inner, spiritual aspect of the human personality, the human person is not viewed as a composite of two separate or disparate substances which somehow come into an uneasy unison in this life while the "spirit" longs to free itself from this bond or bondage. Even though many later Muslim mystics (Sufis) and philosophers accepted such a view, the Koran and orthodox Islam regard a human being as a unitary functioning organism; their view of afterlife is, therefore, not of the soul's survival after bodily death but, rather, of God's revival of the whole organism on the Day of Resurrection. In this life, health means the well-being of the

*Professor, Department of Near Eastern Languages and Civilizations, University of Chicago, Oriental Institute, 1155 East Fifty-eighth Street, Chicago, Illinois 60637.

© 1984 by The University of Chicago. All rights reserved.
0031-5982/84/2704-0409$01.00

whole organism, in body and mind. The Koran speaks of Saul's receiving from God "amplitude of body and knowledge" (2:243).

Religion and Medical Tradition

Although a few medical treatments are attributed to the Prophet Muhammad himself, it is not until the late seventh century—about half a century after Egypt's conquest by Muslims—that the Arabs came into direct contact with Greek scientific medicine in Egypt. It was, however, during the Abbasid caliphate at Baghdad that, from the eighth to the tenth century C.E., systematic translations were officially sponsored by the government from Greek, Syriac, Persian, and Sanskrit. It was particularly Greek works in philosophy, medicine, and the physical sciences (often through the intermediary of Syriac) that formed the basis of the "secular" scientific intellectual culture of Islam that flourished so brilliantly from the ninth to the fourteenth century C.E. and influenced so durably and profoundly the medieval European tradition. Whereas in the eighth and ninth centuries the majority of medical men in Islam were Christians, Jews, or Zoroastrians who wrote in Arabic, later on Muslims themselves took over the medical art, although none of them knew any Greek. It is also worth noting that, although Muslims had the philosophical and scientific Greek works translated into Arabic, works of Greek literature and religion were left alone. Islamic monotheistic belief did not allow Greek gods, goddesses, and their mythologies to enter the sacred territory and confuse its spiritual content.

But alongside scientific thought and rational philosophy, Hermetism, Gnosticism, and other forms of occult and magical trends also entered into Islam. Astronomy and astrology, scientific chemistry and alchemy, scientific medicine and supernatural healing all existed side by side with one another. Certain areas of the occult did, indeed, help the development of science. Alchemy, by which one sought to discover the extraordinary or "miraculous" qualities of substances, did help the discovery of their natural qualities, but this is not true of astrology, which was strongly disapproved of by the orthodoxy, or of supranatural healing, unless it meant certain forms of parapsychology [1, pp. 81 ff.].

Nevertheless, the zeal with which medicine was cultivated and assigned a high religious priority is striking to both a historian of religion and a historian of medicine. A great eleventh- to twelfth-century theologian and mystic, who otherwise gave high priority to medicine, complained that some medical doctors were trying to popularize the slogan "First look after your body and [only] then after your spiritual well-being" (*badanak thumma dīnak*), thereby deluding the common man into the wrong priorities [3]. Eventually, when most sects of religious learn-

ing in the Arabic Middle East shut the door on rational philosophy (fourteenth century onward) as being too dangerous for religion, this maxim gained currency: "[Valid] knowledge is only two types—knowledge of religion and knowledge of medicine" [4]. "After performing God's worship and the basic duties of Islam, there is no greater service to God than to treat patients," says a prominent orthodox authority of the fourteenth century C.E. [3]. But this is only one side of the picture, although the more prominent and the influential side; philosophy, when driven out of the orthodox Sunni fold, found a prosperous home in Shīʿa Iran, where it also remained largely outside the Shīʿa orthodox circles but found a great deal of patronage from the hands of the rulers. Its method remained rational, but its goal became mystical and its culmination point was reached in the thought of Mullā Ṣadrā Shīrazi (d. 1641), an existentialist with a vengeance and certainly one of the most original philosophic minds of all time. This type of mystico-philosophical milieu devalued medicine vis-à-vis philosophy. Says Ṣadrā about the renowned philosopher and doctor Ibn Sīnā (Latin, Avicenna; Hebrew, Aven Sina; d. 1037 C.E.): "Despite the fact that God had given him the highest possible gift, the gift of metaphysical thought, he wasted his valuable time in medicine and writing prescriptions. The result was a truncated philosophy full of doubts" [5]. Of course, the target here is not medicine per se but any occupation or pursuit that may be undertaken at the expense of the pursuit of metaphysics. Ṣadrā's kind of devaluation of the art of medicine is certainly not typical of Islamic intellectuals in general.

Ibn Sīnā himself, although he was far from orthodox in many of his views, was, nevertheless, a man of intense and sincere religious views which were based on his philosophic thought but which he passionately held to be "true" Islamic views and in complete harmony with the world view of the Koran. Those views were so intimately related to his medical outlook that he "lived through" them as verities: just before he died of his last illness, he gave up treating himself, saying "the manager of my body [i.e, the soul] has given up its management; no treatment will be effective" [6]. This has reference to his firm conviction (contrary, it would seem, to that of the Koran and obviously derived from Hellenic philosophy) that man is really the soul, which, during man's earthly career, manages and looks after its body; the body, in turn, helps the soul develop, but after its self-development, the soul does not need the body and discards it. Finally, we may also note, as an illustration of the intimate relationship of religion with the medical profession, that Ibn al-Nafīs of Damascus (d. 1288), who is credited with the discovery of the pulmonary blood circulation, wrote, in addition to his medical works, a spiritual biography of the Prophet Muhammad. In contrast to Ibn Sīnā, Ibn al-Nafīs was highly orthodox in his religious belief.

Religious Medicine: "The Prophetic Medicine"

Fairly early in Islam there came into existence (tenth century C.E.) a curious mixture of the medieval tradition and the religious orthodox tradition known as the "Prophetic Medicine." There are about a dozen and a half works of this name, some of which have been published. The Shīʿa have also left us several works (one of which is in published form in the Regenstein Library, University of Chicago) titled "Medicine of the Imāms" [7]. This peculiar tradition existed side by side with the scientific medical tradition in Islam. For example, an early work bearing this title was authored by the famous traditionalist Abū Nuʿaim, who is better known as the author of a pious work on tradition titled "The Jewelry of Saints" and who died in 1038 C.E.; he was thus a contemporary of Ibn Sīnā. These works of Prophetic Medicine are generally sober works; although they do contain elements of "therapeutic" prayers and amulets, these constitute a tiny fraction of the whole. Their content by and large consists of medical principles and doctrines originating in the scientific medical tradition and certain observations, herbal prescriptions, and other natural cures which claim authority from the Prophet Muhammad, but which Ibn Khaldūn, the famous Spanish cultural historian (d. 1406 C.E.), characterized as "Bedouin Medicine." It is correct to say that these works represent a "vulgarization" of the scientific medical tradition.

The important question, however, from our present perspective concerns the motivation of this peculiar medical literature. Was it a product of a pure-and-simple vulgarization motive, a sort of "Medicine Made Easy"? If so, why was the Prophet's authority invoked—even in the titles—when ordinary secular "simplification" of medicine would have sufficed? It has been argued, particularly by Manfred Ullmann, that the Prophetic Medicine phenomenon was an Islamic response to Greek medicine and that it represented an assertion of the prophetic authority over against a "pagan Galen" [8]. The trouble with this thesis is that authors of Prophetic Medicine liberally cite Galen and other secular ancient medical authorities. Ullmann himself has quoted the famous traditionalist-historian Ibn al-Jauzī (d. 1200 C.E.) as saying in the Introduction to his *Useful Selections from Medicine* that he has given equal consideration in this work to the traditions from the Prophet and his companions, on the one hand, and those of medical authorities, on the other [8]. This is exactly what another famous religious authority, al-Dhahabī (d. 1348), says in the Introduction to his Prophetic Medicine. The celebrated jurist-theologian Ibn Taimiya (d. 1328), supporting himself by early Muslim authorities, holds that acquiring medical, mathematical, or other knowledge from pagans is perfectly legitimate since this does not pertain to matters of faith [9]. If ancient Greek medical

men were to be condemned on the grounds of their paganism, how could they be put on par with the Prophet and his companions? Also, in that case, the Muslim followers of that pagan scientific tradition should have been condemned, just as, as noted earlier, Muslim followers of the Greek philosophical tradition were actually condemned by the orthodoxy along with the Greek followers of that tradition. There is, however, no trace of this in these works of popular medicine.

The motivation appears to have been the result of an intertwining of two factors, related to each other ad priorem et posteriorem. One was to claim credit for medicine on behalf of the Islamic tradition itself, and particularly the Prophet (we shall presently remark on the Shīʿa literature that parallels that of the Sunnis), not necessarily to deprive a pagan Galen of his contributions. This factor in turn rests on the basic high value attached to health and medicine. The logic seems to be: How could Islam, which expressly claims to look after man's interest in this world as well as in the hereafter, have neglected to initiate such a humanitarian teaching at its very source, no matter how much was contributed to it later by the Greek tradition of medicine?

In this literature, prayers as well as amulets and things that belong to the magical realm (although Islamic orthodoxy had sternly banned magic and the occult) supplement the natural cures. These may well have been encouraged by the writings of Ibn Sīnā. For, although in his medical writings there is no trace of such practices or their recommendation, in several of his philosophical works there are discussions of miracles. Although he disallowed supranatural miracles as "irrational," he nevertheless espoused certain types of miracles which could be explained psychologically or parapsychologically as manifestations of what he called "the lordship of the mind over the body." It is on similar grounds that he also explains the effects of prayers [2]. Indeed, for him people can get well or sick through the "strong concentration" of a pure mind, just as they can become well or ill by their own willpower (besides natural cures).

Corresponding to Sunni works of Prophetic Medicine, the Shīʿa wrote works titled "Medicine of the Imāms." The editor of one such work by the two sons of Bistām, dated about the eighth century but published in 1965 [7], counts 13 titles of this genre. This work, unlike those by the Sunnis, lays unusually great stress on the spiritual merits of suffering and strongly advocates that one should not see a doctor unless illness has become advanced enough so that it appears to be beyond the bearing point: "One night of suffering is more meritorious than a whole year of worshipping God" [3]. Disease is essentially purgatory and entails spiritual rewards: ʿAlī once visited Salmān the Persian [a companion of the Prophet] who was sick. On ʿAlī's inquiry about his health, Salmān said that he felt quite sick, but that he was praising God. ʿAlī advised him to

be of good cheer because, "none among our followers [i.e., the Shīʿa] ever fell sick but that he has committed some sin and this sickness is his purgation." Said Salmān, "If the matter is as you have described it—and it must be so—then there is no reward for us in sickness except purgation?" ʿAlī replied, "Indeed, you have reward as well, because you are patient [in your sickness]" [7]. The contemporary editor of this work, Muhammad Mahdi, in his "Editor's Introduction," in his zeal to underline the medical expertise of the sixth Imām, Jaʿfar al-Ṣādiq, narrates an anecdote. Once, in the presence of the famous doctor Yūḥannā ibn Māsawaih (a Christian descended from a family of doctors from Gundishāpūr, who was director of a hospital in Baghdad and is also said to have translated medical works into Arabic), the Imām described the four humors as blood, air, phlegm, and bile; Ibn Māsawaih requested that he repeat this, adding, "By God! Galen himself could not have given such a description!" Apart from the substitution of air for one of the two biles, there is a gap of a century between the two men: Jaʿfar al-Ṣādiq died in 765 C.E., whereas Ibn Māsawaih died in 857. In this anecdote, there is a suggestion that the Imām was superior to Galen in medicine.

Tensions within Religious Doctrine on Medicine

In the section Religion and Medical Tradition, I pointed out that certain eminent religious authorities like al-Ghazālī had protested against what they perceived to be excessive claims on behalf of medicine by some medical men. That protest, however, concerned priorities and relative values to be attached to religious and medical knowledge. In the preceding section, I produced evidence to the effect that medicine was, in fact, given the highest priority after ritual worship and that even a very conservative religious authority like Ibn Taimiya defended the learning of medicine from non-Muslim authors and teachers as perfectly legitimate. Indeed, Ibn Taimiya argues that just as it is lawful to seek guidance on the way from non-Muslims, so it is lawful to learn medicine and other sciences from non-Muslims' works—the latter being even more legitimate since Galen and other Greeks did not write medical and scientific works in order to deceive or misguide anyone [9].

We consider the effects of certain religious doctrines on certain medical issues. First, a general consideration about medication: Can things forbidden by law be used as medication or as part of medication? The Koran forbids the eating of pig and denounces the drinking of alcohol (in the last of its four statements on the subject of alcohol [5:90]). But in all passages where the pig is forbidden, the Koran makes an explicit exception for "cases where it may be necessary." A large number of jurists authorized the use of pig and alcohol as medicines, "where this may be necessary." The Ḥanafi school of law in particular was the most

liberal on the use of alcohol [10]. However, a number of "rightist" theologians like Ibn Taimiya make a distinction between a threat of death by starvation or thirst in which eating pig or drinking alcohol may be allowed, on the one hand, and treatment of a sickness where they do not allow it, on the other. The reasons for this difference are said to be, first, that death from starvation is certain, whereas death from a disease is not certain because sometimes people are cured with or without treatment; and, second, that satiation of a starving person with pig's meat is certain because the causal connection here is obvious, whereas the causal connection between a specific medical treatment and restoration of health is not obvious. What is unlawful cannot be made lawful on the basis of conjecture but only on the basis of certainty [8].

It was on this basis, although more or less unconscious, that the dissection of dead human bodies was discouraged, if not outright forbidden, by many. Here we come face to face with two contradictory principles in Islamic law. The first is that "*muthla* is forbidden in Islam." In pre-Islamic times, Arabs sometimes mutilated the bodies of their enemies who fell in battles "in order to make an example [*mithāl,* from which *muthla* comes] out of them." In the third year of the Islamic Era (625 C.E.), such mutilation was perpetrated on Ḥamza, an uncle of the Prophet Muhammad who had fallen in the battle of Uḥud. Of course, assimilation of medical dissection to mutilation was facilitated by the "uncertainty" of the benefit of dissection: "Is it really worth it?"—this, despite another general legal principle that says, "The needs of the living have priority over those of the dead" [11].

Invoking this last principle, in 1967 the Islamic Research Institute of Pakistan (of which I happened to be director at the time) responded affirmatively to a question whether it was permissible in Islam to transplant the eyes of a dead person into a living person. An influential section of the daily press supported our opinion, but the majority of the representatives of the traditionalist theologians did not approve of it—even though in this case the principle of "uncertainty" of the effect does not have much force since in the majority of cases such transplants work.

In certain instances there are contradictory traditions, all allegedly emanating from the Prophet. Historical criticism would teach us that in all such cases neither side of the contradictory traditions can go back to the Prophet and that both represent the views of the early generations of Muslims that were subsequently projected back to the Prophet. But historical criticism of traditions has not yet found its way among Muslims. A highly interesting example is the permissibility of conception control. There are contradictory reports going back to the Prophet, one alleging that the Prophet said that coitus interruptus (which was a common practice among Arabs) is a "lesser infanticide," the other asserting that when someone reported to the Prophet the statement of some people that

coitus interruptus was a lesser infanticide, he emphatically repudiated it. There is also a third report, which appears to have a ring of truth about it. According to this, a companion of the Prophet (the Prophet himself is not brought in here) declared that during the Prophet's lifetime, while the Koran was being revealed, people practiced coitus interruptus but the Koran never said anything on the subject, which means that it was allowed. In subsequent developments in Islam, although the majority of jurists prohibited conception control and abortion, basing themselves on the prohibitionist report from the Prophet given above and the principle of the "strength of the community" through multiplication of numbers, a sizable minority allowed them both (abortion for up to 3 months of pregnancy) on the basis of either the mother's health or economic stringency. The most interesting opinion is that of al-Ghazālī (d. 1111), who says that for those highly pious people who have developed "trust in God" or providence, conception control is unlawful. But this is only a tiny minority; the vast majority of people are incapable of such trust in God. For the latter, there is no harm if they exercise conception control. Indeed, conception control becomes obligatory for people who fear that, if they have children, they might be compelled to obtain the requisite means of feeding them by foul measures like stealing. Al-Ghazālī goes so far as to say that if a husband fears that if his wife bears children, this might affect her health or good looks and he might develop some dislike for her, he should avoid having children [12]. In the contemporary Muslim world, most Muslim governments have instituted family planning programs, supporting their campaigns by the opinions of eminent medieval jurists; the opponents of these programs are not slow to exploit the opposing opinions of other medieval authorities. To these, they have added new propaganda of political dimensions, namely, that the whole idea of family planning and population control has originated in the West, which, afraid of the rising populations of the Third World, has brought forth this idea to contain the Third World.

The advantage of a religion like Islam in this respect is that, since there is no church to lay down a decisive policy on such matters and no single authority can have his opinion unanimously accepted, people have to "fight it out" with each other on religious-moral grounds. This, no doubt, means the creation of a new consciousness among the people at large on such debated issues. On the whole, this holds out a great future for progress, even if that progress may involve a relatively lengthy process. On the use of dead bodies, for example, it is not difficult to bring out clearly and sharply the difference between the old and vicious practices of mutilation of bodies of persons killed in war, on the one hand, and their scientific dissection for the necessary development of medical progress in the larger interests of humanity, on the other. On family planning, again, it is not difficult, given persistence and

sincerity, to meet the traditional argument about the strength of the community based on numbers and argue that, since there are now about 900,000,000 Muslims around the world, what is urgently required is replacement and augmentation of strength through quantity by strength through quality, which would require population control through family planning.

Finally, we may note the religious attitude to the problem of pestilence and infection in Islam. Again, there are contradictory traditions attributed to the Prophet, which shows that he cannot be the author of either type of statement. According to a famous tradition, the Prophet said, "If one of you has mangy camels, let him not take those to healthy ones belonging to someone else." However, the Prophet is also reported to have said, "There is no such thing as infection (or contagion), omen. . . ." When one of the audience, a bedouin, asked, "If there is no contagion, then how come my camels, which were sound and healthy, were spoiled by the incoming of one mangy camel?" the Prophet is reported to have countered this question by another question, "How did the first camel get infected?" The most important factor in the theological determination of this issue was the fact that, although many or most animals or humans were affected by a contagion, some were not. This led many religious men to deny the causal relationship of infection and bring in the principle of divine determination: if God wills, a disease can affect them; if He does not, it does not become transitive. This is particularly true of orthodox (Ashʿarite) theology, which, on principle, denies all natural causality, something which was impossible to accept in practical life. The division of Muslims on this point is also shown by an early report that, once (around 638 C.E., if the story is true) when pestilence spread in a place in Syria, the Muslim army was ordered evacuated by the Caliph ʿUmar I. When the local commander, Ibn al-Jarrāḥ, opposed ʿUmar's order by saying, "Are you fleeing from God's decree?" the latter answered, "I am fleeing from God's decree into God's decree" [13], meaning that it was God's decree that the pest had broken out in a certain place but that it was also God's decree that it had not broken out in other places and that Muslims must seek safety there. This would, however, go against yet another putative report from the Prophet: "When you hear that pest has broken out in a certain place, do not go there, but if it happens to break out where you are, do not flee from it" [14], meaning that, if you flee, you are likely to carry infection with you to the other places.

This dictum is squarely based on the recognition of the reality of contagion. In general, however, the Muslim medical men treat infectious diseases and pests separately, although occasionally they include the latter under the former. Pests are almost universally attributed to a "corruption of the air," against which certain measures can be taken.

The pest, therefore, is generally understood to strike every individual directly and not through infection, although, as I have just said, sometimes the pest is seen as part of infectious diseases like leprosy or tuberculosis (which are also sometimes regarded as hereditary diseases). But in the case of pests, although natural precautions are recommended since they have natural causes, God's will is often invoked because not all people die of pests (the question of individual resistance to infection is hardly discussed). In view of the actual experience and observation of infectious phenomena, however, the question of the divine will progressively recedes and all Prophetic traditions denying its reality are interpreted away in the tradition of Islamic scientific medicine.

Cosmopolitan Character of the Islamic Civilization

An important dimension often overlooked or insufficiently appreciated by historians of Islam is the impact of the cosmopolitan nature of the Islamic civilization and culture on the development of science and medicine, especially on the latter. It has been noted recently by social scientists that Islam is capable of living and thriving in diverse cultures from the shore of the Atlantic, across Central Asia and the subcontinent, to Indonesia. However, that Islamic civilization was the first international and global civilization in which not only different nations and peoples but different races and faiths participated has never been fully realized by historians until the late Marshall Hodgson's *The Venture of Islam* [15]. Never before had there been such a systematic and fruitful cooperation on a large scale among diverse segments of humanity in science, medicine, and philosophy. In this respect, then, the civilization of Islam was the genuine precursor of the modern civilizations. At the caliphal court of Baghdad were scientists and medical men who were Hindus, Christians, Jews, and Muslims. Ibn Malkā, the eleventh-century Jewish philosopher and doctor of Baghdad, attained his highest glory as caliphal court physician as a Jew and only late in his life became a Muslim. Many eminent Christians and Jews became Muslim, though many others did not and yet attained high positions. In twelfth-century Cairo, Ibn Jum aʿi "the Israelite" was the personal physician of Salāḥ al-Dīn al-Ayyūbī (Saladin), the famous adversary of the crusader Richard the Lion-Hearted, while the illustrious Maimonides (Ibn Maimūn in Arabic and known as Rambam in Jewish history from his initials, including "rabbai" as his title) succeeded him in this office. But it was in Spain that, under Muslim aegis, the collaboration among Muslims, Christians, and Jews reached its high-water mark and resulted in brilliant developments in literature and, even more important, in philosophy, science, and medicine.

The main language in which medical, scientific, and philosophical

works were written was Arabic. For these reasons, this entire medical literature is known as "Islamic medicine," even though, as I said earlier, the very early carriers of scientific medicine in Islam were Christians, Jews, and Zoroastrians; even in later centuries many belonged to these faiths. This is because Islam was not just a religion in the sense of a dogmatic system; rather, it generated a comprehensive civilization, and the impetus for the development of the "secular" sciences came directly from Islam itself as a world view permeated by a faith. At the civilizational level, it was broad and tolerant enough to cut across boundaries of race, color, and faith. This contrasts with the situation in the modern West, where scientific development cannot be attributed to the Christian or Jewish faiths but to the growth of a secular mind that sharply distinguishes between a "private faith" on the one hand and a "temporal" life on the other—a dichotomy unknown to Islam. This secular development has, in turn, reacted on the Western faiths and has tended to make them more flexible.

"Acculturation" of Medicine in Islam and Its Decline

Islamic medicine remained productive at a high level through the fourteenth century C.E.; its decline began in the fifteenth century. The decline of medicine was part of the general decline of natural and intellectual sciences in Islam. What brought about that decline is a question frequently discussed by the cultural historians of Islam, but probably no definite and clear-cut explanation can be given for the complex phenomena of the rise and decline of civilizations. It is much easier to discount certain answers. For example, the almost universal explanation given by modernist Muslims—namely, that this decline was the result of external factors, chief among them being the Mongol invasion of the lands of Islam and the destruction of Baghdad in 1257 C.E.—does not appear to be correct. For, although the Baghdad caliphate was destroyed and much damage was done to certain other Muslim cultural centers, nevertheless, one cannot speak of the destruction of the Islamic civilization thereby: indeed, from the ruins of Baghdad arose three brilliant and gigantic Muslim empires lasting from roughly the fourteenth and fifteenth centuries to the twentieth century (in the case of the Ottoman empire).

A second important question is, What is the relationship of religion to medicine? Many Westerners have held that it was the narrow-mindedness of the Islamic orthodoxy (particularly Ashʿarite) as it developed over time that stifled "rational sciences," that is, philosophy and the natural sciences. Of philosophy this charge is patently true, since Muslim philosophers had propounded certain doctrines that were regarded as gravely and dangerously heretical, such as the eternity of the world and

impossibility of physical resurrection. But even though Ashʿarite theologians formally denied the efficacy of the cause-effect relationship, this was by no means meaningful at the practical level, and certainly scientists, while doing science, regarded this dogma as irrelevant. In fact, scientific activity went on at a high level for centuries after the spread of the Ashʿarite dogma. A medical man of the caliber of Ibn al-Nafīs, mentioned earlier, was an Ashʿarite in his theology and even subscribed to the Ashʿarite view of physical resurrection.

I have underlined, especially in the section on Prophetic Medicine, the high religious value with which the art of medicine was invested. This contributed decisively to the unique acculturation of medicine in Islam, a situation that was not enjoyed by any other natural science. But this did not destroy or detract from the scientific character of medicine. In fact, in the various institutions of higher learning in Turkey and Egypt, medicine was one of the subjects of specialization, along with literature, theology, and law. Right up to the end of the eighteenth century, the Ottoman government regularly invited European doctors to Turkey to hold discussions with Ottoman doctors trained in the Islamic tradition, and apparently those discussions and seminars were participated in by both sides on a basis of parity, both sides learning from each other. Yet, there is no doubt that in several fields, particularly anatomy and surgery, Western medicine had taken a decisive lead. So far as Islamic society and culture were concerned, the traditional medicine had become its integral and organic part: it was considered almost as necessary for a town, and even many villages, to have a doctor (*ṭabīb*)—no matter how ill-qualified—as it was to have a mullah (and not infrequently one person combined both qualifications, since medical training, as noted above, was a part of religious training and medical service was looked on essentially as a religious service).

But the historically, if not logically, inevitable happened in 1838 when the Ottoman ruler (he inaugurated the era of professional Westernizers) Mahmud II established a new medical school on entirely Western lines and staffed by Western doctors. He pointed out that the Islamic works of medicine were in Arabic, which was very difficult for Turks to learn, and consequently they had fallen into neglect for many years, that translating them into Turkish would take a long time, and translating medical works from Western languages would also be cumbersome. The solution? A medical college with French as the medium of instruction—this the Turks could easily accomplish! Egypt and other Muslim countries went the same way in the nineteenth and twentieth centuries. By now a large number of modern doctors have been produced in these countries, the only difference from the past being that there are no signs as yet whether the new medical tradition will become integrated with the religious-cultural values of Islam. The new medical professionals are doc-

tors, *not* Muslim doctors, probably the main reason being that their knowledge is derivatively acquired from the West, not originally created (a state of affairs likely to continue indefinitely).

REFERENCES

1. BROWNE, E. G. *Arabian Medicine.* Cambridge: Cambridge Univ. Press, 1921.
2. Koran [Qur'ān]. Numbers noted in text refer to appropriate chapter and verse.
3. RAHMAN, F. Islam and Health. *Hamdard Islamicus*, vol. 4, 1982.
4. RAHMAN, F. *Islamic Methodology in History.* Karachi, 1965.
5. RAHMAN, F. *The Philosophy of Mullā Ṣadrā.* Albany: State Univ. New York Press, 1975.
6. RAHMAN, F. "Avicenna and the Islamic Orthodoxy." In *Festschrift to Harry A. Wolfson*, vol. 2. Jerusalem: American Academy for Jewish Research, 1965.
7. IBNĀ BISṬĀM. *Tibb al-A'imma* [Medicine of the Imāms]. Teheran, 1965.
8. ULLMANN, M. *Die Medizin im Islam.* Leiden, 1970.
9. IBN TAIMIYA. *Majmūʿ fatāwā* [Collected works] 2d ed. Rabat: by the late King Khalid of Saudi Arabia, 1981.
10. *Shorter Encyclopaedia of Islam*, s.v. "*Khamr*" (alcohol).
11. IBNʿ ĀBIDĪN. *Radd al-Muḥtār*, vol. 3. Cairo, 1966.
12. SHALTŪT, M. *Al-Islām: ʿAqīda wa Sharīʿa.* Cairo (n.d. [1963?]), p. 212.
13. NUʿMĀNĪ, S. *Omar the Great*, vol. 1. Translated by Ẓ. ʿAlī Khān. Lahore, 1961.
14. AL-BUKHĀRI. *Ṣaḥiḥ, Ṭibb*, no. 30.
15. HODGSON, M. *The Venture of Islam*, 3 vols. Chicago: Univ. Chicago Press, 1974.

FIRST LOVERS

When lightning blazed through primal clouds,
new molecules stormed primal seas.
They clung and coupled, intertwined,
first lovers in a primal world.
There was no Eden here, no Tree,
and none to hear a soundless Voice,
yet births occurred and for
eternity there would be life,
and death, and change, and all
that Genesis would someday say.

SAMUEL STEARNS